



**Department of Economics**  
**Scheme of Examination and Syllabus for Under**  
**Graduate Programme**  
**Under Multiple Entry and Exit, Internship and CBCS-**  
**LOCF as per NEP-2020**  
**w.e.f. session 2024-25 (in phased manner)**

**Subject: Economics**



**Guru Jambheshwar University of Science  
& Technology Hisar-125001, Haryana**

**(A+ NAAC Accredited State Govt. University)**

**Guru Jambheshwar University of Science and Technology**  
**Hisar-125001, Haryana**  
**(‘A+’ NAAC Accredited State Govt. University)**  
**Scheme of Examination & Syllabus for affiliated Degree Colleges for UG Programme**  
**According to National Education Policy-2020**  
**(Semester III to Semester VI)- Multidisciplinary (SCHEME-A)**  
**w.e.f. 2024-25 Onwards**  
**Subject: Economics**

<b>SEMESTER III</b>								
Type of Course	Course Code	Nomenclature	Credit	Contact Hrs.	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs.)
Discipline Specific Course	C24ECO301T	Macroeconomics-I	4 (3L+1T)	4	30	70	100	3
Minor Course/ Vocational Course	C24MIC306T	Financial Institutions and Markets	4 (3L+1T)	4	30	70	100	3
Multidisciplinary Course	C24MDC309T	Economics of Education	3 (2L+1T)	3	25	50	75	2.5
Skill Enhancement Course	C24SEC306T	Fundamentals of Village Economy	2	2	15	35	50	2
	C24SEC306P	Practices of Village Economy	1	2	10	15	25	2
<b>SEMESTER-IV</b>								
Type of Course	Course Code	Nomenclature	Credit	Contact Hrs.	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs.)
Discipline Specific Course	C24ECO401T	Macroeconomics-II	4 (3L+1T)	4	30	70	100	3
Minor Course/ Vocational Course MIC 4 (VOC)	C24VOC406T	Indian Statistical System	2	2	15	35	50	2
	C24VOC406P	Indian Statistical System Lab	2	2	15	35	50	2
Value Added Course	C24VAC424T	Understanding State Budget	2	2	15	35	50	2

**PROGRAMME OUTCOMES (POs)**

PO1 To develop skills in graduate students so that they are able to acquire theoretical and practical knowledge about economics, economy, economic behaviour, economic policies and economic institutions and economic problems.

PO2 To inculcate ability in students for critical thinking, lateral thinking about economic phenomena, problems and policies so as to create professional potential in them

PO3 To make students aware of resource optimization at all level.

PO4 To provide learning experience in students that instils deep interest in economic science for the benefit of society.

## **Semester-III**

**Economics**  
**Macroeconomics – I (Semester-III)**  
**Discipline Specific Course (DSC)**

**Course Code: C24EC0301T**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

**Note:** The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** The course aims to provide foundational knowledge in macroeconomic theory, focusing on income determination, aggregate consumption, investment behaviour, and monetary systems. It seeks to introduce key macroeconomic concepts and their applications, develop understanding of income, employment, and investment theories, enable analysis of money and banking functions in the economic system.

**Unit I**

**Introduction to Macroeconomics:** Nature, meaning, and scope of macroeconomics, Concepts and measurement of national income statistics, Circular flow of income in two, three, and four-sector economies.

**Unit II**

**Consumption and Investment Functions:** Consumption Function: Average and marginal propensity to consume, Keynesian psychological law of consumption.

Investment Function: Types of investment, investment demand schedule, factors affecting investment decisions, marginal efficiency of capital, static and dynamic multiplier, and accelerator.

**Unit III**

**Theories of Income and Employment:** Determination of income and employment, Classical and Keynesian theories of income, output, and employment, Say's Law of Markets, Principle of Effective Demand.

**Unit IV**

**Money and Banking:** Money: Definition, functions, and role, Quantity theory of money: Fisher's equation and Cambridge equation, Keynesian liquidity preference theory, Banking: Major functions of commercial banks and the process of credit creation.

**Suggested Readings:**

1. Case, Karl E. & Ray C. Fair, *Principles of Economics*, Pearson Education, Inc., 12th Edition, 2016.
2. Ackley, G (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
3. Branson, W. A. (1989), *Macroeconomics: Theory and Policy*, 3rd ed., Harper & Row.
4. Shapiro, E. (1996), *Macroeconomics: Analysis*, Galgotia Publications, New Delhi.
5. Stiglitz, J.E. & Carl E. Walsh (2002), *Principles of Macroeconomics*, W.W. Norton.
6. Samuelson, P. & Nordhaus, *Economics*, Tata McGraw Hill, 19th Edition (2009).
7. Mankiw, N. Gregory, *Principles of Economics*, South-Western College, 8th Edition (2017).

**Course Outcomes (COs):** At the end of the course, the students would be able to:

**CO1:** Understand core macroeconomic concepts and national income accounting.

**CO2:** Analyse consumption and investment functions in theoretical frameworks.

**CO3:** Evaluate theories of income, employment, and monetary systems.

**Mapping of COs with POs:**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	S
CO2	S	S	M	M
CO3	S	M	M	S

**S = Strong | M = Medium | W = Weak**

## Economics

### Financial Institutions and Markets (Semester-III) Minor Course (MIC-3)

**Course Code: C24MIC306T**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

**Note:** The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** To provide comprehensive understanding of the structure, role, and functioning of financial systems, intermediaries, markets, and institutions in the context of economic development, both domestically and internationally.

#### Unit I

Nature and Role of Financial System, Money and finance — Money and near-money, financial intermediation and financial intermediaries, Structure and functions of the financial system, Functions of the financial sector, Indicators of financial development, Equilibrium in Financial Markets, Financial System and Economic Development

#### Unit II

Criteria to evaluate assets: Risk and financial assets, types of risk, return on assets, Risk — Return trade-off, Valuation of Securities, Structure of Interest Rates, Theories of interest rate determination, Long and short period interest rates, Term structure of interest rates, spread between lending and deposit rates, administered interest rates, Appropriate interest rate policy

#### Unit III

The Central Bank, Commercial Banks, Non-bank Financial Intermediaries, Monetary Policy and Functions of Central Bank Objectives of monetary policy in developed and developing countries, Instruments of monetary policy, Proliferation of banking and non-bank financial intermediaries, Credit creation and its control, Effectiveness and efficiency of monetary policy, Development banks — role and functions, Investment and merchant banking, Financial sector reforms in India

#### Unit IV

International Financial Markets: Nature, organization and participants, Reforms in international monetary system, Lending operation of World Bank and affiliates, Working of IDA and IFC, Theory of optimum currency areas, Growth of regional financial institutions, Development bank lending, Asian Development Bank, Euro-dollar and Euro-Currency markets, Regulation at the international level

#### Suggested Readings:

1. Bhole, L.M. (1999), *Financial Institutions and Markets*, Tata McGraw Hill
2. Bhole, L.M. (2000), *Indian Financial System*, Chugh Publications
3. Edmister, R.O. (1986), *Financial Institutions, Markets and Management*, McGraw Hill
4. Machiraju, M.R. (1999), *Indian Financial Systems*, Vikas Publishing
5. Prasad, K.N. (2001), *Development of India's Financial System*, Sarup & Sons
6. Robinson, R.I., Wrightman, D. (1981), *Financial Markets*, McGraw Hill
7. Smith, P.F. (1978), *Money and Financial Intermediation*, Prentice Hall

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. **CO1:** Explain the structure and function of financial systems and intermediaries.
2. **CO2:** Analyze monetary policy instruments and evaluate banking reforms.
3. **CO3:** Understand international financial markets and development institutions.

#### CO-PO Mapping Table

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	S
CO2	S	S	M	M
CO3	S	M	M	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Economics of Education (Semester-III)**  
**Multidisciplinary Course (MDC)**

**Course Code: C24MDC309T**  
**45 Hrs. (3 Hrs./Week)**  
**Credit : 3 (2Theory+1Tutorial)**  
**Exam Time: 2.5 Hrs.**

**External Marks :50**  
**Internal Marks :25**  
**Total Marks: 75**

**Note:** The maximum time duration for attempting the paper will be of 2.5 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit consisting of 12.5 marks each in addition to compulsory Question No. 1.

**Course Objective:** To equip students with an understanding of the role of education in economic development, explore investment in education from an economic perspective, and evaluate educational planning and policy using economic tools and principles.

**Unit I**

**Introduction to Economics of Education:** Meaning, nature, scope and significance of Economics of Education, Education as a consumption and investment activity Education and economic growth, The concept of human capital, Education and human resource development

**Unit II**

**Demand and Supply in Education:** Demand for education: private and social demand, Determinants of demand: cost of education, income, taste, preference, occupation, gender, and region, Concept of cost of education: private cost, social cost, direct and opportunity cost, Supply of education and role of government

**Unit III**

**Education Financing and Cost-Benefit Analysis:** Resource allocation to education: primary, secondary, higher education, Private and public expenditure on education, Cost-benefit analysis of education: rate of return to education (private and social), Educational subsidies, grants, loans, and incentives, Equity in education financing

**Educational Planning and Policy:** Educational planning: need, objectives, and types, Manpower planning and forecasting, Education and labour market, Issues in educational policy in India, Role of international agencies (like UNESCO, World Bank) in education development

**Suggested Readings:**

1. Blaug, M. (1972). *Introduction to Economics of Education*, Penguin Books.
2. Psacharopoulos, G. (1985). *Human Capital and Investment in Education*, Oxford University Press.
3. Tilak, J.B.G. (2003). *Economics of Human Resource Development in India*, A.P.H. Publishing Corporation.
4. Woodhall, M. (1992). *Cost-benefit Analysis in Educational Planning*, UNESCO: International Institute for Educational Planning.
5. Schultz, T.W. (1961). *Investment in Human Capital*, The American Economic Review.
6. Vaizey, J. (1962). *Economics of Education*, London.
7. Tilak, J.B.G. (Ed.). (2019). *Education and Development in India: Critical Issues in Public Policy*, Palgrave Macmillan.

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. **CO1:** Explain the fundamental economic principles applied to education.
2. **CO2:** Analyze educational investment decisions through cost-benefit and financing tools.
3. **CO3:** Evaluate education planning, policies, and their implications for development.

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	S
CO2	S	S	M	M
CO3	S	M	M	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Fundamentals of Village Economy (Semester-III)**  
**Skill Enhancement Course (SEC)**

**Course Code: C24SEC306T**  
**30 Hrs. (2 Hrs./Week)**  
**Credit : 2 (Theory)**  
**Exam Time: 2 Hrs.**

**External Marks:35 Marks**  
**Internal Marks :15 Marks**  
**Total Marks: 50 Marks**

**Note:** The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

**Course Objective:** To provide students with experiential and conceptual knowledge of rural/village economic systems, their practices, challenges, and opportunities, fostering a deeper understanding of grassroots economic structures and their impact on development.

**Unit I**

**Structure of Village Economy:** Overview of rural economic structure: land, labour, capital, and organization, Agrarian economy and rural livelihoods, Occupational structure: agriculture and allied sectors (livestock, forestry, fisheries), Caste, gender, and class dynamics in village economy, Role of informal institutions: caste panchayats, kinship networks

**Unit II**

**Village Institutions and Governance**

Panchayati Raj Institutions (PRI): structure, functions, and finances, Role of Self-Help Groups (SHGs) and cooperatives in rural development, Rural credit and microfinance institutions, Implementation of rural development programs: MGNREGA, NRLM, PMGSY, etc, Grassroots governance and participatory planning

**Suggested Readings:**

1. Dandekar, V. M. (1980). *Poverty in India*, Economic and Political Weekly.
2. Desai, A. R. (Ed.). (1983). *Rural Sociology in India*, Popular Prakashan.
3. Jodhka, S. S. (2002). *Village Society*, Orient BlackSwan.
4. Shah, G. (1990). *Grassroots Movements in India*, Sage Publications.
5. Dreze, J. and Sen, A. (2013). *An Uncertain Glory: India and its Contradictions*, Penguin.
6. Government Reports on Rural Development Schemes (Ministry of Rural Development, Govt. of India)

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. **CO1:** Understand the structural and institutional features of village economy.
2. **CO2:** Analyze rural development programs and their functioning at the grassroots level.
3. **CO3:** Apply field-based learning to develop a realistic understanding of rural economic practices.

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	M
CO2	S	S	M	S
CO3	S	S	S	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Practices of Village Economy (Semester-III)**  
**Skill Enhancement Course (SEC)**

**Course Code: C24SEC306P**  
**30 Hrs. (2 Hrs./Week)**  
**Credit : 1 (Practical)**

**External Marks : 15**  
**Internal Marks :10**  
**Total Marks: 25**

**The Practical Exam will be taken by outside examiner**

**Course Objective:** To provide students with experiential and conceptual knowledge of rural/village economic systems, their practices, challenges, and opportunities, fostering a deeper understanding of grassroots economic structures and their impact on development.

**Unit I**

**Fieldwork and Practical Engagement**

Exposure to village economy through short field visits, Data collection on local livelihoods, resource use, and institutions, Interaction with PRI members, SHG leaders, farmers, artisans, and rural entrepreneurs, Preparation of village economic profile/project report, Group presentations and discussion

**Suggested Readings:**

1. Dandekar, V. M. (1980). *Poverty in India*, Economic and Political Weekly.
2. Desai, A. R. (Ed.). (1983). *Rural Sociology in India*, Popular Prakashan.
3. Jodhka, S. S. (2002). *Village Society*, Orient BlackSwan.
4. Shah, G. (1990). *Grassroots Movements in India*, Sage Publications.
5. Dreze, J. and Sen, A. (2013). *An Uncertain Glory: India and its Contradictions*, Penguin.
6. Government Reports on Rural Development Schemes (Ministry of Rural Development, Govt. of India)

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. **CO1:** Understand the structural and institutional features of village economy.
2. **CO2:** Analyze rural development programs and their functioning at the grassroots level.
3. **CO3:** Apply field-based learning to develop a realistic understanding of rural economic practices.

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	M
CO2	S	S	M	S
CO3	S	S	S	S

**S = Strong | M = Medium | W = Weak**



## **Semester-IV**

**Economics**  
**Macroeconomics – II (Semester-IV)**  
**Discipline Specific Course (DSC)**

**Course Code: C24EC0401T.**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

**Note:** The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** This course aims to provide a comprehensive understanding of IS-LM analysis, inflation and trade cycle theories, and develop analytical skills to examine balance of payments and exchange rate systems.

**Unit I**

IS-LM analysis: Derivations of the IS and LM functions, IS-LM and aggregate demand, Shifts in the IS-LM curve.

**Unit II**

Inflation Theories: Inflation: Types and theories – cost-push and demand-pull, Measures to control inflation, Relationship between inflation and unemployment, Phillips curve in the short run and long run.

**Unit III**

Trade cycle: Meaning, phases, and theories, Theories by Samuelson and Hicks, Monetary and fiscal policies for stabilization.

**Unit IV**

Balance of Payments and Exchange Rate: Balance of payments and exchange rate, Balance of payments: Current account and capital account, Market for foreign exchange, Determination of exchange rate.

Suggested Readings:

1. Case, Karl E. & Ray C. Fair, Principles of Economics, Pearson Education, Inc., 8th Edition, 2007.
2. Sikdar, Shoumyen, Principles of Macroeconomics, 2nd Edition, Oxford University Press.
3. Lipsey R.G. and K.A. Chrystal (1999), Principles of Economics, 9th Edition, Oxford University Press.
4. Ackley, G (1978), Macroeconomics: Theory and Policy, Macmillan, New York.
5. Branson, W. A. (1989), Macroeconomics: Theory and Policy, 3rd ed., Harper and Row, New York.
6. Shapiro, E (1996), Macroeconomics: Analysis, Galgotia Publication, New Delhi.
7. Stiglitz J. E. and Carl E. Walsh (2002), Principles of Macroeconomics, W.W. Norton and Company, New York.
8. Paul Samuelson and Nordhaus (2005), Economics, 18th Ed., Tata Hill Publishing Company, New York.
9. Mankiw N. Gregory (2007), Principles of Economics, Thomson, Indian Reprint.

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. CO1: Apply IS-LM analysis to evaluate macroeconomic equilibrium.
2. CO2: Interpret inflation trends and assess stabilization measures.
3. CO3: Analyze trade cycles and balance of payments issues.

**Mapping of COs with POs:**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	S	M	S
CO2	S	M	S	M
CO3	S	S	S	M
CO4	S	S	M	M

S = Strong | M = Medium | W = Weak

**Economics**  
**Indian Statistical System (Semester-IV)**  
**MIC (VOC)**

**Course Code: C24VOC406T**  
**30 Hrs. (2 Hrs./Week)**  
**Credit : 2 (Theory)**  
**Exam Time: 2 Hrs.**

**External Marks :35**  
**Internal Marks :15**  
**Total Marks: 50**

**Note:** The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No.

**The Practical Exam will be taken by External Examiner**

**Course Objective:** To familiarize students with the evolution, structure, and functioning of the Indian Statistical System, with a focus on its role in policy-making and socio-economic development. The course integrates theoretical understanding with hands-on training in data sourcing and analysis.

**Unit I**

**Introduction to Indian Statistical System:** Historical background and evolution of official statistics in India, Role and responsibilities of key statistical agencies: MoSPI, CSO (now NSO), NSSO, and other central agencies, Importance of statistics in governance and planning, Institutional framework and coordination among statistical bodies.

**Data Collection and Statistical Surveys:** National Sample Surveys (NSS): objectives, methods, and periodicity, Census of India: demographic, socio-economic data and its significance, Annual Survey of Industries (ASI), Economic Census, Agricultural statistics, price statistics, labour force surveys, Issues of data quality, reliability, and timeliness

**Unit II**

**Statistical Systems at State Level and Sectoral Statistics**

Statistical infrastructure at the state level, Role of State Statistical Bureaus (SSBs), District and village-level data systems, Sectoral statistics: education, health, labour, environment, Identifying, extracting, and compiling data from official websites and portals.

**Suggested Readings:**

1. Ministry of Statistics and Programme Implementation (MoSPI), *Annual Reports*
2. Mahalanobis, P.C., *Contributions to Indian Statistical System*
3. Mukhopadhyay, P., *Statistical Methods in Social Science Research*, Sage Publications
4. India Statistical Year Book, MoSPI
5. Census of India – *Primary Abstracts and Handbooks*
6. Economic Survey of India & State Statistical Abstracts
7. Selected NSSO and NFHS reports

**Course Outcomes (COs):** At the end of the course, the students would be able to:

**CO1:** Understand the organizational and functional structure of the Indian Statistical System.

**CO2:** Identify and use various official datasets for economic and social analysis.

**CO3:** Apply basic tools to analyze and interpret public data for research and planning

**CO-PO Mapping Table**

Outcomes	P01	P02	P03	P04
CO1	S	M	S	M
CO2	S	S	S	S
CO3	S	S	M	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Indian Statistical System Lab (Semester-IV)**  
**MIC (VOC)**

**Course Code: C24VOC406P**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 2 (Practical)**

**External Marks :35**  
**Internal Marks :15**  
**Total Marks: 50**

**Course Objective:** To familiarize students with the evolution, structure, and functioning of the Indian Statistical System, with a focus on its role in policy-making and socio-economic development. The course integrates theoretical understanding with hands-on training in data sourcing and analysis.

**Unit I**

**Data Collection and Statistical Surveys:** National Sample Surveys (NSS): objectives, methods, and periodicity, Census of India: demographic, socio-economic data and its significance, Annual Survey of Industries (ASI), Economic Census, Agricultural statistics, price statistics, labour force surveys, Issues of data quality, reliability, and timeliness

**Unit II**

**Statistical Systems at State Level and Sectoral Statistics**

Statistical infrastructure at the state level, Role of State Statistical Bureaus (SSBs), District and village-level data systems, Sectoral statistics: education, health, labour, environment, Identifying, extracting, and compiling data from official websites and portals.

**Practical Data Analysis and Interpretation:** Use of official datasets (NSS, Census, ASI, NFHS, etc.), Techniques for basic descriptive statistics and graphical representation, Use of Excel/SPSS/R for statistical summaries and charts, Preparing short data-based reports on socio-economic indicators, Data interpretation for planning and policymaking

**Suggested Readings:**

1. Ministry of Statistics and Programme Implementation (MoSPI), *Annual Reports*
2. Mahalanobis, P.C., *Contributions to Indian Statistical System*
3. Mukhopadhyay, P., *Statistical Methods in Social Science Research*, Sage Publications
4. India Statistical Year Book, MoSPI
5. Census of India – *Primary Abstracts and Handbooks*
6. Economic Survey of India & State Statistical Abstracts
7. Selected NSSO and NFHS reports

**Course Outcomes (COs):** At the end of the course, the students would be able to:

**CO1:** Understand the organizational and functional structure of the Indian Statistical System.

**CO2:** Identify and use various official datasets for economic and social analysis.

**CO3:** Apply basic tools to analyze and interpret public data for research and planning

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	M
CO2	S	S	S	S
CO3	S	S	M	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Understanding State Budget (Semester-IV)**  
**Value Added Course (VAC)**

**Course Code: C24VAC424T**  
**30 Hrs. (2 Hrs./Week)**  
**Credit : 2 (2Theory)**

**External Marks :35**  
**Internal Marks :15**  
**Total Marks: 50**

**Note:** The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No.

**Course Objective:** To provide students with foundational knowledge of state budgeting processes and enable them to critically analyze the fiscal priorities, expenditures, and revenue patterns with a specific focus on Haryana's economy.

**Unit I**

**Fundamentals of State Budgeting:** Importance and objectives of a state budget, Constitutional provisions and the budget process in Indian states, Structure and types of budgets: revenue, capital, surplus, deficit, Key components: revenue, receipts, capital receipts, revenue expenditure, capital expenditure, understanding fiscal indicators: fiscal deficit, primary deficit, debt-to-GSDP ratio, Budget formats and documents used in Indian states.

**Unit II**

**Haryana State Budget – A Sectoral and Fiscal Analysis:** Overview of Haryana's fiscal profile: trends in revenue and expenditure, Sectoral allocations in Haryana's budget: agriculture, health, education, infrastructure, etc, Analysis of development vs non-development expenditure, Role of Central transfers and devolution in Haryana's budget, Public investment and fiscal responsibility in Haryana, Case study: Highlights of the latest Haryana State Budget.

**Suggested Readings:**

1. Government of Haryana (latest), *Budget Documents*, Finance Department, Govt. of Haryana
2. Reserve Bank of India, *State Finances: A Study of Budgets*
3. Economic and Statistical Organisation, Haryana – *Statistical Abstracts & Economic Surveys*
4. Lekhi, R.K. & Lekhi, Joginder Singh, *Public Finance*, Kalyani Publishers
5. Reports of Haryana State Finance Commission
6. CBGA (Centre for Budget and Governance Accountability) Budget Briefs

**Course Outcomes (COs):**

1. **CO1:** Explain the framework and components of a state budget and its constitutional context.
2. **CO2:** Evaluate the fiscal and sectoral priorities of the Haryana state budget.
3. **CO3:** Interpret and critically assess key budget indicators and public policy in Haryana.

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	M
CO2	S	S	M	S
CO3	M	S	S	S

S = Strong | M = Medium | W = Weak

SEMESTER V								
Type of Course	Course Code	Nomenclature	Credit	Contact Hrs.	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs.)
Discipline Specific Course	C24ECO501T (i)  OR  C24ECO501T (ii)	Economics of Development  OR  Public Finance	4 (3L+1T)	4	30	70	100	3
Minor Course/ Vocational Course MIC 5 (VOC)	C24VOC506T	Primary Survey and Data Collection	2	2	15	35	50	2
	C24VOC506P	Primary Survey and Data Collection Lab	2	2	15	35	50	2
Skill Enhancement Course	Internship @ 4 Credits							
SEMESTER-VI								
Type of Course	Course Code	Nomenclature	Credit	Contact Hrs.	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs.)
Discipline Specific Course	C24ECO601T (i)  OR  C24ECO601T (ii)	Economic Development and Policy in India  OR  Environmental Economics	4 (3L+1T)	4	30	70	100	3
Minor Course/ Vocational Course MIC 6	C24MIC606T	Budgetary Theory and Practice	4 (3L+1T)	4	30	70	100	3
Minor Course/ Vocational Course MIC 7 (VOC)	C24VOC606T	Data Analysis	2	2	15	35	50	2
	C24VOC606P	Data Analysis Lab	2	2	15	35	50	2

## **Semester-V**

**Economics**  
**Economics of Development (Semester-V)**  
**Discipline Specific Course (DSC)**

**Course Code: C24ECO501T (i)**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

**Note:** The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** The course aims to provide an in-depth understanding of economic development, highlighting various theories, models, and challenges faced by developing economies. It focuses on poverty, population issues, measures of development, and growth models, enabling students to critically analyse development policies and practices.

**Unit I**

Economic growth and economic development, development and underdevelopment, approaches to economic development, factors affecting economic growth.

**Unit II**

Poverty — absolute and relative; measuring poverty – head count and poverty gap, vicious circle of poverty. Human development index (HDI) and other indices of development and quality of life. Population problem and growth pattern of population in developing countries.

**Unit III**

Traditional measures of economic development – national income, per capita income, UNDP indices for measurement of development. Classical theory of development – Adam Smith and Marx.

**Unit IV**

Steady state growth models – Harrod-Domar, neo-classical model of growth – Robert Solow, Cambridge model of growth – Joan Robinson.

**Suggested Readings:**

1. Adelman, I. (Latest edition). *Theories of Economic Growth and Development*. Stanford University Press, Stanford.
2. Ghatak, S. (Latest edition). *An Introduction to Development Economics*. Allen and Unwin, London.
3. De la Grandville, O. (Latest edition). *Economic Growth: A Unified Approach*. Cambridge University Press.
4. Hayami, Y. (1997). *Development Economics*. Oxford University Press, New York.
5. Kindleberger, C. P. (Latest edition). *Economic Development* (3rd ed.). McGraw Hill, New York.
6. Meier, G. M. (Latest edition). *Leading Issues in Economic Development* (6th ed.). Oxford University Press, New Delhi.
7. Myint, H. (Latest edition). *The Economics of Underdeveloped Countries*. Praeger, New York.
8. Thirlwall, A. P. (Latest edition). *Growth and Development*. Macmillan, London.

**Course Outcomes:** At the end of the course, the students would be able to:

CO1: Understand the core concepts of economic development and growth.

CO2: Analyze poverty, inequality, and demographic issues in developing economies.

CO3: Evaluate classical and modern growth theories and their policy implications.

**Mapping of CO with PO:**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	S
CO2	S	S	M	M
CO3	S	M	M	S
	S = Strong	M = Medium	W = Weak	



**Economics**  
**Public Finance (Semester-V)**  
**Discipline Specific Course (DSC)**  
**Option-II**

**Course Code: C24VOC506T (ii)**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

**Note:** The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** The course aims to equip students with a comprehensive understanding of the role of the public sector in the economy, focusing on the principles and practices of public finance including taxation, public expenditure, public debt, and budgetary policy. Students will learn how government financial policies impact economic development, distribution of resources, and social welfare.

**Unit I**

The principle of public finance – subjective and objective criteria, Theory of public expenditure: maximum social advantage, Theory of social goods; distinction between public, private, and merit goods, Public expenditure types and effects on production, distribution, and economic growth

**Unit II**

Public revenue: approaches of equity in taxation, Benefits principle, cost of service principle, ability to pay theory, Effects of taxation, Analysis of major taxes: income tax, expenditure tax, corporation tax, wealth tax, excise duties, sales tax, and custom duties, Taxable capacity and taxation in a developing economy, Fiscal incidence: theories of tax shifting, concepts of incidence, and its measurement

**Unit III**

Public debt: role and different forms, Burden and redemption of public debt, Debt management, Budgetary policy: functional and economic classification of budgets and their uses

**Unit IV**

Balance and unbalanced budgets, Fiscal federalism: principles of federal finance, Budget as an instrument of mobilization and channelization of resources, Redistribution of income and wealth

**Suggested Readings**

1. Buchanan, J.M. – *Public Finance in the Domestic Process*, Library Fund, USA
2. Musgrave, R.A. & Musgrave, P.B. – *Public Finance in Theory and Practice* (Latest Edition), McGraw Hill
3. Taylor, P.E. (1949) – *The Economics of Public Finance*, Macmillan Publishers, New York

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. **CO1:** Understand the principles and impact of public expenditure and taxation on economic growth.
2. **CO2:** Evaluate various forms of public debt, budgetary practices, and fiscal policies.
3. **CO3:** Analyse the role of budget and fiscal federalism in redistribution and resource mobilization.

**CO-PO Mapping Table**

Outcomes	P01	P02	P03	P04
C01	S	M	S	S
C02	S	S	M	M
C03	S	M	M	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Primary Survey and Data Collection (Semester-V)**  
**MIC 5(VOC)**

**Course Code: C24VOC506T**  
**30 Hrs. (2 Hrs./Week)**  
**Credit : 2 (Theory)**  
**Exam Time: 2 Hrs.**

**External Marks :35**  
**Internal Marks :15**  
**Total Marks: 50**

**Note:** The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

**Course Objective:** To equip students with the knowledge and practical skills required to design, conduct, and analyze primary surveys. Emphasis will be placed on data collection techniques, sampling methods, questionnaire design, and ethical considerations involved in fieldwork.

**Unit I**

Fundamentals of Surveys and Sampling: Importance and scope of surveys in socio-economic research, Types of surveys: cross-sectional, longitudinal, census vs. sample surveys, Sampling techniques: random, stratified, cluster, purposive, and snowball sampling, Sample size determination and its implications.

**Unit II**

Survey Design and Questionnaire Development: Steps in survey planning and execution, Structure and types of questionnaires: open-ended vs. close-ended questions, Scaling techniques: Likert, semantic differential, ranking, etc, Pilot testing and validation of survey instruments, Ethics in survey research: consent, privacy, and neutrality

**Suggested Readings:**

1. Groves, R.M. et al. *Survey Methodology*, Wiley
2. Czaja, R. & Blair, J., *Designing Surveys: A Guide to Decisions and Procedures*
3. Goode & Hatt, *Methods in Social Research*, McGraw-Hill
4. Kothari, C.R., *Research Methodology: Methods and Techniques*, New Age International
5. NSSO Manuals & Fieldwork Guidelines, MoSPI
6. UN Statistical Division Handbook on Designing Household Surveys

**Course Outcomes (COs):**

1. **CO1:** Understand the foundational concepts and types of surveys and sampling techniques.
2. **CO2:** Develop and implement survey tools effectively for primary data collection.
3. **CO3:** Apply basic tools to clean, analyze, and interpret survey data for meaningful insights.

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
C01	S	M	S	M
C02	S	S	M	S
C03	S	S	S	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Primary Survey and Data Collection Lab (Semester-V)**  
**MIC 5(VOC)**

**Course Code: C24VOC506P**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 2 (Practical)**

**External Marks :35**  
**Internal Marks :15**  
**Total Marks: 50**

**Course Objective:** To equip students with the knowledge and practical skills required to design, conduct, and analyze primary surveys. Emphasis will be placed on data collection techniques, sampling methods, questionnaire design, and ethical considerations involved in fieldwork.

**Unit I**

**Fieldwork and Data Collection Techniques (Practical-Oriented):** Tools and modes of data collection: face-to-face interviews, telephone, online, etc, Use of CAPI (Computer-Assisted Personal Interviewing) and mobile apps, Interviewer training and respondent handling, Recording, coding, and storing survey data, Mock surveys in nearby localities.

**Unit II**

**Data Cleaning, Analysis, and Reporting:** Editing and cleaning of raw data, Entry of survey data using Excel/SPSS/R, Descriptive statistics: frequencies, percentages, averages, Data visualization: bar charts, pie charts, histograms, Writing a basic field survey report

**Suggested Readings:**

1. Groves, R.M. et al. *Survey Methodology*, Wiley
2. Czaja, R. & Blair, J., *Designing Surveys: A Guide to Decisions and Procedures*
3. Goode & Hatt, *Methods in Social Research*, McGraw-Hill
4. Kothari, C.R., *Research Methodology: Methods and Techniques*, New Age International
5. NSSO Manuals & Fieldwork Guidelines, MoSPI
6. UN Statistical Division Handbook on Designing Household Surveys

**Course Outcomes (COs):**

1. **CO1:** Understand the foundational concepts and types of surveys and sampling techniques.
2. **CO2:** Develop and implement survey tools effectively for primary data collection.
3. **CO3:** Apply basic tools to clean, analyze, and interpret survey data for meaningful insights.

**CO-PO Mapping Table**

Outcomes	P01	P02	P03	P04
CO1	S	M	S	M
CO2	S	S	M	S
CO3	S	S	S	S

**S = Strong | M = Medium | W = Weak**

# **Internship @ 4 Credits**

**Economics**  
**Economic Development and Policy in India (Semester-VI)**  
**Discipline Specific Course (DSC)**

**Course Code: C24ECO601T (i)**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

**Note:** The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** To provide a comprehensive understanding of India's economic development since independence, including structural changes, demographic trends, poverty, inequality, and the effects of reforms on various sectors of the economy.

**Unit I**

Economic development since independence: major features of Indian economy at independence, Characteristics of economic underdevelopment of India (with reference to colonial rule of India), Trends in national income and per capita income; sectoral composition (output and employment) – primary, secondary and tertiary, Development under different policy regimes—goals, constraints, institutions and policy framework

**Unit II**

Population and human development: broad demographic features—population size and growth rates, sex and age composition, occupational distribution, Density of population, urbanization and economic growth in India, Population growth as a factor of economic development, National population policy, progress of human development in India, Development of education in India, health and family welfare and the development of health infrastructure

**Unit III**

Structural change of post-independent Indian economy: growth, distribution and trends of national income, sectoral distribution, An assessment of performance—sustainability and regional contrasts, Structural change, savings and investment, Trends, measurement and policies in poverty, Inequality—measurement, causes and effects, Unemployment—types, causes and employment policies in India

**Unit IV**

Indian economy in post-reform period: background of Indian economic reforms, New economic policy; redefining India's development strategy, changing role of state and market, Industrial policy, disinvestment policy and privatization, Financial sector reforms including banking reform

**Suggested Readings:**

1. Dreze, Jean and Amartya Sen (2013), *An Uncertain Glory: India and its Contradictions*, Princeton University Press
2. Pulapre Balakrishnan, *Economic Reforms and Growth in India: Essays from Economic and Political Weekly*, Orient Blackswan (2011)
3. Kapila, Uma (Latest edition), *Indian Economy: Performance and Policies*, Academic Foundation, New Delhi
4. Mishra, S. K. and Puri, V. K., *Indian Economy*, Himalaya Publishing House (Latest Ed.)
5. Panagariya, Arvind (2008), *India: The Emerging Giant*, Oxford University Press

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. **CO1:** Understand the trajectory of India's economic development since independence and key structural changes.
2. **CO2:** Analyze the demographic trends, human development indices, and related policies.
3. **CO3:** Evaluate post-reform economic strategies and the evolving role of state and market.

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	S
CO2	S	S	M	M
CO3	S	M	M	S

S = Strong | M = Medium | W = Weak

**Economics**  
**Environmental Economics (Semester-VI)**  
**Discipline Specific Course (DSC)**

**Course Code: C24ECO601T (ii)**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

Note: The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** To introduce students to the economic dimensions of environmental problems, develop understanding of environmental policies, valuation techniques, and promote sustainable thinking for ecological well-being.

**Unit I**

Key environmental issues and problems, Economic way of thinking about environmental issues, Basic economic concepts, Pareto optimality and market failure in the presence of externalities, Property rights and other approaches

**Unit II**

Design and implementation of environmental policy, Overview of Pigouvian taxes and effluent fees, tradable permits, Implementation of environmental policies in India and international experience, Transboundary environmental problems, Economics of climate change

**Unit III**

Environmental valuation methods and applications, Valuation of non-market goods and services— theory and practice, Measurement methods, Cost-benefit analysis of environmental policies and regulations

**Unit IV**

Sustainable development: concepts and measurement, Perspectives from Indian experience

**Suggested Readings:**

1. Roger Perman, Yue Ma, Michael Common, David Maddison and James McGilvray, *Natural Resource and Environmental Economics*, Pearson Education/Addison
2. Goodstein, E.S. (latest edition), *Economics and the Environment*, Prentice Hall
3. Hanley, N., Shogren, J.F., and White, B. (latest edition), *Environmental Economics in Theory and Practice*, Macmillan Publication
4. Varian, Hal R., (latest edition), *Intermediate Micro-Economics: A Modern Approach*, East-West Press
5. Bhattacharya, Rabindranath (2002), *Environmental Economics: An Indian Perspective*, Oxford University Press

**Course Outcomes (COs):** At the end of the course, the students would be able to:

1. **CO1:** Identify key environmental problems and understand how economics addresses these issues.
2. **CO2:** Analyze and evaluate environmental policies and international practices.
3. **CO3:** Apply valuation techniques and principles of sustainable development in real-world environmental contexts.

**CO-PO Mapping Table**

Outcomes	PO1	PO2	PO3	PO4
C01	S	M	S	S
C02	S	S	M	M
C03	S	M	M	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Budgetary Theory and Practice (Semester-VI)**  
**Minor Course (MIC)**

**Course Code: C24MIC606T**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 4 (3Theory+1Tutorial)**  
**Exam Time: 3 Hrs.**

**External Marks :70**  
**Internal Marks :30**  
**Total Marks: 100**

**Note:** The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 2 marks each. In addition to that eight more questions will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks.

**Course Objective:** To provide students with a comprehensive understanding of public budgeting, fiscal federalism, government spending, and the theory and practice of intergovernmental grants. The course aims to equip students with analytical tools to assess public financial decisions and their economic implications.

**Unit I**

**Government and the Market:** Government in a market system, Production, provision, and privatization, Efficiency and inefficiency in the public sector, Structure of governments: levels of governance, public service delivery, Designing federal structure; Centre-state-local relations, Evolution of fiscal federalism in India

**Unit II**

**Measuring the Size and Scope of Government:** Comparison challenges in government size, Federal, state, and local revenue and spending, Determinants of government growth, Optimal size of government

**Unit III**

**Government Spending and Budgeting:** Budgeting process: off-budget vs. on-budget funds, Revenue forecasting, Expenditure planning and zero-based budgeting, Budgeting and public choice, Balanced budgets, deficits, and public debt

**Unit IV**

**Intergovernmental Grants:** Theory and practice of federal grants, Growth and decline of federal transfers, Purpose of grants: correcting externalities, redirecting priorities, Efficiency and equity impacts of grants

**Suggested Readings:**

1. Buiter, W.H. (1990). *Principles of Budget and Fiscal Policy*, MIT Press
2. Hyman, D.N. (2007). *Public Finance: A Contemporary Application of Theory to Policy*, Thomson Asia
3. Davie, B.F. & Duncombe, B.F. (1970). *Public Finance*, Holt Rinehart and Winston
4. Jha, R. (1987). *Modern Theory of Public Finance*, Wiley Eastern
5. Mishra, B. (2006). *Economics of Taxation: Theory and Application*, Akansha Publishing
6. Musgrave, R.A. (1959). *The Theory of Public Finance*, Tata McGraw Hill
7. Bhargav, P.K. (1982). *Centre-State Resource Transfers in India*, Academic Press
8. Borkar, V.V. (1971). *Income Tax Reform in India*, Popular Prakashan
9. Chelliah, R.J. (Ed.) (1997). *Towards Sustainable Growth*, OUP

**Course Outcomes (COs):** At the end of the course, the students would be able to

1. **CO1:** Understand the theoretical foundations of public budgeting and fiscal policy.
2. **CO2:** Analyze government spending, revenue systems, and budgetary mechanisms in a federal system.
3. **CO3:** Evaluate the role of intergovernmental grants in promoting fiscal equity and efficiency.

**CO-PO Mapping Table**

Course Outcomes	PO1	PO2	PO3	PO4
CO1	S	M	S	M
CO2	S	S	M	M
CO3	S	S	S	S

**S = Strong | M = Medium | W = Weak**

**Economics**  
**Data Analysis (Semester-VI)**  
**Minor Vocational Course (MIC7-VOC)**

**Course Code: C24VOC606T**  
**30 Hrs. (2 Hrs./Week)**  
**Credit : 2 (Theory)**  
**Exam Time: 2 Hrs.**

**External Marks :35**  
**Internal Marks :15**  
**Total Marks: 50**

**Note:** The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

**Course Objective:** To equip students with essential skills in data handling, statistical techniques, and the use of analytical tools to interpret economic data. The course integrates theory with hands-on practice using software to analyze real-world economic datasets and draw meaningful inferences.

**Unit I**

Introduction to Economic Data and Basic Tools: Types of data: Cross-section, Time-series, and Panel data, Sources of economic data: NSSO, CSO, RBI, World Bank, IMF, etc, Introduction to descriptive statistics: Mean, Median, Mode, Variance, Standard Deviation, Introduction to Data Cleaning and Data Structuring.

Data Presentation and Visualization: Tables, charts, and graphs for economic data, Histogram, Pie charts, Bar charts, Line graphs, Cross-tabulations and frequency distributions, Introduction to data visualization tools: Excel, R, Python

**Unit II**

Basic Statistical and Econometric Techniques: Correlation and Regression analysis, Hypothesis testing: t-test, chi-square test, Simple linear regression using economic variables, Introduction to time-series analysis.

**Suggested Readings:**

1. Gujarati, D.N. & Porter, D.C. (2009). *Basic Econometrics*, McGraw-Hill Education
2. Wooldridge, J.M. (2012). *Introductory Econometrics: A Modern Approach*, South-Western
3. Field, A. (2013). *Discovering Statistics Using SPSS*, Sage Publications
4. Ramanathan, R. (2002). *Introductory Econometrics with Applications*, Cengage
5. Anderson, Sweeney & Williams (2011). *Statistics for Business and Economics*, Cengage Learning
6. Ghosh, B.N. (1982). *Scientific Method and Social Research*, Sterling Publishers

**Course Outcomes (COs):**

1. **CO1:** Understand and summarize economic data using appropriate statistical tools.
2. **CO2:** Apply basic econometric methods to analyze economic relationships.
3. **CO3:** Demonstrate practical skills in using software for economic data analysis.

**CO-PO Mapping Table**

Course Outcomes	P01	P02	P03	P04
CO1	S	M	S	M
CO2	S	S	M	M
CO3	S	S	S	S

**S = Strong | M = Medium | W = Weak**



**Economics**  
**Data Analysis Lab (Semester-VI)**  
**Minor Vocational Course (MIC7-VOC)**

**Course Code: C24VOC606P**  
**60 Hrs. (4 Hrs./Week)**  
**Credit : 2 (Practical)**

**External Marks :35**  
**Internal Marks :15**  
**Total Marks: 50**

**The Practical Exam will be taken by External Examiner**

**Course Objective:** To equip students with essential skills in data handling, statistical techniques, and the use of analytical tools to interpret economic data. The course integrates theory with hands-on practice using software to analyze real-world economic datasets and draw meaningful inferences.

**Unit I**

Introduction to Data Cleaning and Data Structuring, Data Presentation and Visualization: Tables, charts, and graphs for economic data, Histogram, Pie charts, Bar charts, Line graphs, Cross-tabulations and frequency distributions, Introduction to data visualization tools: Excel, R, Python

**Unit II**

Basic Statistical and Econometric Techniques: Correlation and Regression analysis, Hypothesis testing: t-test, chi-square test, Simple linear regression using economic variables, Introduction to time-series analysis. Applications with economic data.

Hands-on Data Analysis: Using MS Excel/SPSS/R for basic data analysis, Importing, cleaning, and managing data, Application of descriptive and inferential statistics to real economic data, Mini project: Analyzing a small economic dataset and reporting insights

**Suggested Readings:**

1. Gujarati, D.N. & Porter, D.C. (2009). *Basic Econometrics*, McGraw-Hill Education
2. Wooldridge, J.M. (2012). *Introductory Econometrics: A Modern Approach*, South-Western
3. Field, A. (2013). *Discovering Statistics Using SPSS*, Sage Publications
4. Ramanathan, R. (2002). *Introductory Econometrics with Applications*, Cengage
5. Anderson, Sweeney & Williams (2011). *Statistics for Business and Economics*, Cengage Learning
6. Ghosh, B.N. (1982). *Scientific Method and Social Research*, Sterling Publishers

**Course Outcomes (COs):**

1. **CO1:** Understand and summarize economic data using appropriate statistical tools.
2. **CO2:** Apply basic econometric methods to analyze economic relationships.
3. **CO3:** Demonstrate practical skills in using software for economic data analysis.

**CO-PO Mapping Table**

Course Outcomes	P01	P02	P03	P04
CO1	S	M	S	M
CO2	S	S	M	M
CO3	S	S	S	S

**S = Strong | M = Medium | W = Weak**